

put in their case in the District Court for the District of Columbia. It was a settlement mutually acceptable to both sides.

It might be well at a later time to describe more in detail what took place. I wish to assure the Senator from Minnesota and the Senator from Utah that I shall be happy to shed light on the situation. Something perhaps should be said to clear up some of the confusion with regard to the appointment of the monitors. I cannot speak from personal experience about what has happened since the appointment of the monitors, because I have not been in the case for some time.

But I believe I know what happened when the monitors were appointed and why they were appointed and I have excellent facilities for getting the facts on what has happened since they were appointed.

Mr. McCAPTHY. The Senator from Connecticut has made a valuable contribution to the discussion. As he has said, he has been identified with the matter from the beginning, when he was not a Member of Congress, and he is fully familiar with what I consider to be a continuing problem. I look forward to the time when the Senator from Connecticut will make a comprehensive statement on the problem. I yield the floor.

Mr. BARTLETT subsequently said: Mr. President, to the best of my knowledge, one union in the United States, and one union only, continues under the control of a monitorship. I refer, of course, to the Teamsters Union. I have little knowledge, personally, of the affairs of that union, and no acquaintance whatever with its top officials. However, it seems to me, since the Labor-Management Act of 1959 was enacted to provide, among other things, for free elections in all unions operating in the United States, that that right ought to be reinstated soon—at the very earliest possible moment—for the Teamsters Union.

One million, six hundred thousand members—good Americans—of this great labor craft have a right, it seems to me, to decide who their officers shall be. It has been said that the monitors are draining the resources of the union's treasury. That may be true, or it may not be true; I do not know. But it is certain that the monitorship arrangement requires the expenditure from the union's treasury of large sums of money. This is not a democratic system which ought to be continued ad infinitum. The time has come, it occurs to me, when the members of the Teamsters' Union ought to have the right to elect their national officers, and the choice should be theirs. It might be that the monitors would not agree with that choice, but that does not matter in a democratic country such as ours.

For example, over the years, many criticisms have been made of the union of which Harry Bridges is the president. Yet no effort has been made to take the control of that union from the officers elected by its members and to place such control in the hands of a board of monitors. I do not think that

ought to be done indefinitely with respect to any union.

I am glad the senior Senator from Indiana [Mr. CAPEHART] has introduced a bill on this subject, and I join several of my colleagues in expressing the hope that the bill will have early consideration. In making that statement, I do not wish to imply a personal belief that Congress should intervene in connection with matters now pending before the courts. In whatever way this is to be accomplished, I firmly believe that the members of the Teamsters Union should, at the earliest possible date, have the right to elect their own officers.

MESSAGE FROM THE HOUSE

A message from the House of Representatives, by Mr. Bartlett, one of its reading clerks, announced that the House had agreed to the report of the committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 11510) to amend further the Mutual Security Act of 1954, as amended, and for other purposes.

ENROLLED BILLS SIGNED

The message also announced that the Speaker had affixed his signature to the following enrolled bills, and they were signed by the President pro tempore:

- S. 2778. An act to amend the act relating to the Commission of Fine Arts;
- H.R. 1607. An act for the relief of Mrs. Anne Morgan; and
- H.R. 10474. An act to authorize construction of modern naval vessels.

THE SUMMIT AND THE TEST BAN FALLACY

Mr. DODD. Mr. President, this coming Monday the leaders of the free world and the supreme dictator of the Soviet world will come together in Geneva for still another summit conference.

There is an uneasiness in all of us, I believe, about the outcome of this conference. There is an uneasiness throughout the country, some of it articulate, most of it inarticulate. Despite our reassuring statements, there is still uneasiness among our allies. As for the so-called neutral nations, from the least of them to the greatest of them, from the most friendly to the most critical—they all know that their fate, too, ultimately depends on the hard reality of American power. And, though they cannot say so, they share the uneasiness of the rest of the free world.

This uneasiness has been fanned by the forcing down of the U-2 reconnaissance plane over Soviet territory last week, by Khrushchev's intemperate diatribes, by his threats to dispatch missiles against those airfields in our allies' countries from which U-2 planes might take off or at which they might land. The fear is now expressed in some quarters that East-West relations have deteriorated to the breaking point and that the issue of peace or war may very well hang on the outcome of the summit conference. I do not believe this is so.

But I am sure that the Communists would like us to believe that it is so.

The purpose of any conference is somehow to amend the status quo. From the standpoint of the free world, the forthcoming conference can result in one of three things. The status quo minus, the status quo plus, or a deadlock. Since the Soviets are making all the demands, and we are making none it is a foregone conclusion that the conference will not result in the status quo plus. A deadlock is the best that can be hoped for. But this is uncertain, even improbable, because we have so heavily committed ourselves to seek some kind of settlement of the crisis Khrushchev has created. There is, therefore, a very serious danger that we shall once again wind up with the status quo minus.

In my opinion, we have, over the past few years, retreated to the point where we now stand quite literally with our backs to the wall. I believe that the American people understand this, and there have been some encouraging evidences that the administration, too, is beginning to understand. Our policy on Berlin has again been firmed up. In this connection, I wish to pay my personal tribute to Under Secretary Dillon's magnificent presentation to the AFL-CIO Conference on World Affairs in New York on April 20. I can recall no more cogent analysis of the world situation or statement of American policy by a spokesman for the Department of State.

If we hew to the policy outlined by Under Secretary Dillon, there will, I am certain, be no surrender on the question of Berlin. But I cannot help fearing that, in the light of Khrushchev's recent tough talk and our own confusion and embarrassment over the recent plane incident, there may be some temptation on our side to purchase a deferment on Berlin by offering concessions in some other area.

Specifically, I fear that, because we do not understand the gravity of the issue, we will yield to the demand for a nuclear test ban covering not only detectable tests which contaminate the atmosphere, but nondetectable tests that do not result in contamination. And if such a treaty should not be signed at Geneva, I am just as worried that, out of deference to the possibility of such a treaty at some future date, we will consent to further prolong the 20-month old voluntary moratorium on weapons tests of all kinds.

It is to this subject, Mr. President, that I wish to direct my remarks.

I speak on this subject for the first time with some hesitation, knowing how much study the distinguished Senators who serve on the Foreign Relations Committee and on the Joint Committee on Atomic Energy have devoted to the problem. I could not have spoken on this subject 6 months ago because I stood in awe of those of my colleagues who could bandy about words like "thermonuclear" and "fissionable" and "neutron." If I venture to speak today on the question of the nuclear test ban, and if I now myself employ a few of the technical words that seemed awesome a few months ago, there are two reasons for this transformation.

Reason No. 1 was a gnawing conviction that the moratorium was wrong,

that the Communists were not abiding by it, that it increased the danger of war rather than diminished it, that it might ultimately cost us our freedom.

Reason No. 2 was my recent illness, which gave me some time for reading and reflection. The more I read, the more I thought about the problem, the more I discussed the matter, the more I was able to replace intuitive estimates with established facts—the stronger my fears and my convictions became.

I now believe that we stand in mortal peril, and that this peril is not many years removed.

The lack of understanding on the test ban issue cannot be explained in terms of its complexity. It is really not that complex. The scientific aspects of the problem can, I assure you, Mr. President, be understood by any intelligent layman. To achieve comprehension, the basic requirement is the kind of understanding of politics and of the nature of communism and of the realities of power relationships that I believe most of us in this Chamber possess.

Why, then, is there so little understanding? I can think of two reasons:

First, the facts have not been given to the public.

Second, our minds have been confused, our nerves dulled, our wills sapped, by what I consider the Kremlin's most spectacular triumph in the realm of propaganda and psychological conditioning.

Thanks to the occasional learned presentations by the distinguished Senator from New Mexico [Mr. ANDERSON] and by the equally distinguished Senator from Tennessee [Mr. GORE], the present occupant of the chair, I believe that we in this body are beginning to have an awareness of the problem. The justification for my speech today is that I believe we must look at the problem both whole and in detail.

We start from the premise that the whole complex of nuclear problems—including such matters as the question of nuclear weapons technology, the strategic and tactical use of nuclear weapons, the test ban, the moratorium—must be viewed within the context of national purpose, as expressed by our foreign policy.

We have certain stated purposes on which there is broad bipartisan agreement. We are committed to the broad, moral purposes that are stated with enduring eloquence in our great historic documents. We are committed to the defense of our own freedoms, and of the free world at large against Communist aggression. We are committed—sincerely, if vaguely and ineffectually—to the extension of freedom to the peoples now enslaved by communism and to the principle of self-determination.

We are committed to the maintenance of peace—with justice, and without surrender. We do not believe in peace at any price. Benjamin Franklin once declared that those who believe they "can give up essential liberty to obtain a little temporary safety deserve neither liberty nor safety." There is as much truth in this in the age of thermonuclear weapons as there was at the time it was written by Franklin.

On these attitudes and purposes we agree. But there have been times in recent years when I have had the impression that the conduct of our foreign policy had somehow been separated from any guiding principles, that we were simply responding on a fire department basis to emergencies and crises created by the Kremlin.

I am even more profoundly convinced that the entire critical relationship between nuclear weapons and foreign policy has not been understood. The nuclear capabilities we have developed are sadly out of balance and at certain points are in conflict with the principles we espouse. They are, I fear, inadequate to cope with the spectrum of dangers that confront us. Our guileless approach to the moratorium is, in my opinion, a reflection of the same disjunction between our nuclear thinking and our national commitments.

All the purposes I have enumerated are interrelated. In order to maintain peace, in order to defend the free world, in order to embark on a positive foreign policy, in order to extend the frontiers of freedom, in order to keep faith with our forebears and our children, in order to reduce the danger of thermonuclear war to a minimum, in order to create a stable basis for peace, there are two prior conditions that must be met.

The first requirement, on which there is no dispute, is that we maintain a superiority in strategic nuclear weapons—that is, large-yield weapons of devastating power—so that the Soviets will never be tempted to seek a settlement of the cold war by means of a thermonuclear Pearl Harbor. We are committed to the avoidance of preventive war. If the Kremlin should strike first, only a portion of our original strength would get off the ground, and only a portion of this, in turn, would reach enemy targets. General Powers has expressed the opinion that a surprise Soviet missile attack could reduce our ability to retaliate to near-zero. This viewpoint has been challenged by other competent officers; but even the most optimistic estimates concede that a surprise strike by the Soviets might immediately eliminate 50 percent or more of our bombers and ICBM's. To serve as an effective deterrent to a surprise attack, therefore, our superiority must be nothing short of overwhelming.

Today, I am inclined to agree with the President that our retaliatory capability is sufficient to deter such an attack. Technological superiority, however, is something that must be constantly renewed. If the Soviets ever achieve superiority or if they beat us to a major breakthrough in the field of nuclear weaponry—for example, the anti-missile missile—a preemptive strike might become a serious possibility. We cannot ignore this possibility, the more so since Soviet military thinkers—and I shall cite evidence of this—have given such serious consideration to the concept of a preemptive strike.

Corollaries of requirement No. 1 would be the development of an anti-missile defense, the invigoration of our civil defense, and a mandatory shelter construction program. The greater our

ability to survive a surprise attack and to retaliate, the less likelihood there is that such an attack will ever take place.

But our strategic deterrent by itself is not enough. Indeed, by itself it may be highly dangerous. There is much to be said for Thomas Murray's argument that we have placed altogether too one-sided an emphasis on multimegaton weapons, that our very capacity "to wreak unlimited nuclear violence inhibits us from the use of limited force which may be politically necessary." I am, in fact, inclined to believe that, with our exclusive reliance on nuclear retaliation, we have succeeded in frightening ourselves and our allies far more than we have frightened the Kremlin.

Obviously, if the Kremlin drops thermonuclear warheads on American cities, we will retaliate in kind; we would have no alternative. But if it is simply a matter of a limited challenge at Berlin or in the Mideast or in the Far East, can we, will we, respond to this by destroying millions of men, women, and children in Soviet cities? This is a terrible decision for any President to have to make, especially when he knows that minutes later a comparable number of American civilians will have perished in the ashes of our own cities.

Requirement No. 2, therefore, is the development of a system of tactical nuclear weapons capable of being used with discrimination against military targets both on the battlefield and in the rear. The possession of such weapons would enable the forces of freedom, in Europe and in Asia, to confront the vastly superior Communist manpower with firepower of "unacceptable" superiority. Only in this way can we offer deterrence to the increasingly serious threat of limited aggression.

"We arm to parley," Winston Churchill once said. The peace of the world can be considered secure only when we have met these two basic requirements—only when we have established deterrence at both the strategic and limited levels. At that point we could go to the conference table with the initiative firmly in our grasp. At that point we could truly embark on a positive foreign policy.

If our weapons requirements should be determined with reference to our national purposes and commitments, our policy on the question of nuclear testing should, in turn, be determined in the light of our weapons requirements. Instead, our once sound policy on the question of the test ban has now degenerated into nothing better than a frightened, unthought-out reaction to the international hysteria which the Kremlin has so cleverly fostered and exploited.

What makes it so difficult to cope with this hysteria is that all of us, whether we recognize it or not, have been afflicted by it, some in smaller degree, some in greater. There can be no question that the overwhelming majority of the decent citizens who favor a test ban believe in freedom and abhor the tyranny of communism. There can also be no question that the agitation for a complete cessation of tests has been the central item on the agenda of the world Communist movement for several

years now. Of this there is ample documentary proof. Through the infinitely subtle propaganda apparatus which they command, through the thousands of channels of information to which they have access, the Communists have unquestionably succeeded in infiltrating this movement and in providing it with much of its guiding philosophy and stock of arguments.

There is nothing novel or really surprising about this situation. There has been a whole series of critical situations in which the Communists have succeeded in persuading the majority of the people in the non-Communist world to believe what the Kremlin wished them to believe. The widely held belief, for example, that the Chinese Communists were not really Communists, but simple agrarian reformers, helped to pave the way for the Communist takeover in China.

The Communists achieved a similar success in the realm of psychological conditioning at the time of the 1944 Communist insurrection in Greece. If you look back through the American newspapers of that time, you will find that a great majority of our editors, our public officials and public opinion molders in general, attacked Prime Minister Churchill for his courageous decision to put down the Communist insurrection. They did so because, in one way or another, they were led to believe that Churchill was intervening against the heroic Greek resistance fighters, and not against a Communist insurrection which had already gone to the point of mass executions of anti-Communist citizens. Today, of course, everyone agrees that Prime Minister Churchill did the right thing. In fact, he did the only thing. But very few people stopped to consider how it was that the Communists were able completely to befuddle our mental processes and destroy our sense of balance.

On the issue of the test ban, we are today the victims, at both governmental and private levels, of the same kind of befuddlement and psychological conditioning that led both public and Government to the wrong conclusions on the Chinese Communists and on the Greek insurrection.

I could list many more such experiences and I hope at a later date to remind the Senate of them.

The general argument in favor of the test ban can be broken down into eight basic propositions, to which I shall hereafter refer as the eight fallacies of the test ban.

FALLACY NO. 1

Fallacy No. 1 is that a test ban agreement would serve to "open up" the Soviet Union—that the stationing of international inspectors at a number of fixed points would at least create a first chink in the armor of secrecy.

Soviet spokesmen have hinted that they might be willing to consider the establishment of a few fixed stations on their territory and a few onsite inspections. The distinguished Senator from Tennessee [Mr. GORE] pointed out, in his statement of March 2, that after 18 months of negotiations, the Soviets have yet to commit themselves to a single on-

site inspection or to the establishment of a single station. All of our efforts to pin them down have failed.

On one occasion, as I have heard, Congressman HOLIFIELD cornered Mr. Semyon Tsarapkin, the chief Soviet delegate to the test ban conference, and demanded to know what quota of annual inspections the Kremlin was prepared to accept. Mr. Tsarapkin, according to the story, shrugged his shoulders and said: "A few." On another occasion Soviet Ambassador Zaroubin contemptuously said to Dr. Alvin Groves of Los Alamos, that the West could, if it wished, have all of its three inspections at the same time.

Personally, I consider it inconceivable that the Soviets will ever accede to the revised Bethe formula calling for 21 manned stations, 600 robot stations, and 300 onsite inspections per year. I consider it highly improbable that they will even accede to the original Geneva formula of 1958, which we now know to be absurdly inadequate, but which called for 21 manned stations on the territory of the Soviet Union, plus 20 to 30 onsite inspections. I am afraid that if they offer us anything remotely resembling the original Geneva formula—perhaps 50 percent of the formula, perhaps 25 percent—we will hail this as a great concession, sign a treaty on Soviet terms, and present this agreement as an assurance of "peace in our time."

It is utter nonsense to argue that such an arrangement would "open up" the Soviet Union. It can be taken for granted that the international inspectors would be confined to their stations and that most of these stations would be located in isolated areas. It can also be taken for granted that the inspectors would see nothing and would have minimal opportunities for contacts. If they engage in a handful of on-site inspections, they would do so in company of the Soviet members of their teams, who would exert themselves to the limit to frustrate their fellow inspectors, and would watch over them with eagle eyes.

I have the greatest doubt that 10,000 or 20,000 American tourists who will visit the Soviet Union next year will in any way help to "open it up." I would point out that the tourist traffic to the Soviet Union was just about as heavy in the mid-thirties, during the heyday of the Stalinist terror, as it is today. It opened up exactly nothing. The tourists saw what Stalin wanted them to see, and most of them returned to this country convinced that the stories of Bolshevik terror were greatly exaggerated.

In his article, "Beware Tourists to Russia," in the Reader's Digest, Eugene Lyons described the manner in which the Kremlin bemuses and befuddles the tourist innocents. But these impressionable ordinary tourists, I am convinced, are far more plausible instruments for "opening up" the Soviet Union than a handful of nuclear test ban inspectors at fixed stations and under constant surveillance.

FALLACY NO. 2

Fallacy No. 2 is the argument that we are now far ahead of the Soviet Union in nuclear weapons technology, that if the race should continue indefinitely the So-

viets would probably surpass us, that a freeze on weapons testing would therefore be to our advantage.

This argument is based on a whole series of assumptions which, as I shall demonstrate later, are, at the worst, demonstrably false; at the best, highly questionable. Among other things, it assumes the following:

That we will be able to conclude a test ban agreement with the Soviets providing for an adequate and enforceable system of inspection.

That, despite any initial inadequacy, the system of inspection will ultimately be improved to the point where weapons tests of any significant magnitude will be detectable.

That, once detection has been established, there will be no serious difficulty in establishing verification.

That, if there is a voluntary moratorium on tests of less than 20 kilotons magnitude, the Soviets will abide by this moratorium; that they will faithfully honor the provisions of the treaty and will not engage in clandestine tests, no matter how much the Kremlin may stand to gain from them.

Fallacy No. 2 has been advanced over and over again as a reason for entering into a formal test ban agreement. It is amazing to me that mature men could give serious consideration to an argument based on so flimsy a substructure of "ifs." Among other things, this argument, after assuming that the Soviets have the ability to surpass us technologically, even without cheating, does not consider what might happen to our technological lead if Khrushchev and company should cheat.

I believe we can take it as a maxim that, if there is something to be gained from it, the Communists will cheat. But let us be generous. Let us assume that there is a 50-50 possibility that Khrushchev and company would adhere to their word. Can the future security of the United States be based on a 50-50 possibility?

This argument also fails to consider what will happen to our technological lead if there should be no agreement, if, instead, the negotiations drag out year after year while, year after year, we continue to renew our voluntary moratorium on all tests in the hope that an agreement may be just around the corner.

At the time the Soviets exploded their first A-bomb, it was estimated that we had something like a 4 to 5 year lead in nuclear technology and weaponry. By the time we embarked on the present moratorium in October 1958, this lead had unquestionably been cut down—according to informed estimates, to a figure of 3 or 4 years at best. If the Soviets have not been observing the honor moratorium, then we have already dissipated almost 2 years of our lead. If the moratorium persists for another 2 years, then, even without an agreement, we shall have completely dissipated our lead in nuclear weapons technology.

FALLACY NO. 3

Fallacy No. 3 is the fallacy of the ultimate technological plateau.

According to this argument, there is little point to the further development

of our nuclear weapons because we already possess sufficient multimegaton weapons and weapons of other yields to destroy the Soviet Union several times over.

This argument ignores the fact that our stockpile of thermonuclear weapons leaves us helpless, unless we are prepared to resort to all-out nuclear war, to cope with some of the limited threats and challenges with which the Kremlin will confront us.

It ignores the fact that the NATO land forces can serve as an effective deterrent to such threats only if their manpower inferiority is offset by the possession of a broad and flexible system of tactical nuclear weapons.

It ignores the fact that research into the possibilities of antimissile defense is still in its infancy.

It ignores the fact that we require new multi-megaton missile systems to cope with hardened missile sites and for other defensive purposes.

that technology has no limits. There is

In short, it ignores the elementary fact no such thing as an ultimate technological plateau. On the contrary, with each new breakthrough, new and more fantastic developmental vistas seem to open up.

The hydrogen missiles we now possess and those that are scheduled for the next few years are not the ultimate weapons. Given a continuing developmental program, there will be a second and third and fourth generation of missiles and warheads.

The yield-to-weight and yield-to-diameter relationship will be improved so that the warheads can be miniaturized.

Missiles will be reduced in size and cost and greatly improved in accuracy. By enabling us to make many more missiles and much more effective and more mobile missiles at a greatly reduced cost, such a development would vastly strengthen our deterrence and would help to vindicate our peace policy.

The energy of fusion explosions will be tailored to produce a variety of effects which correspond to the nature of the intended targets.

Clean weapons of all yields will be produced, thus greatly increasing the utility of the atom for tactical, defensive, and strategic purposes.

Entire new weapons systems will come into being—weapons that seem as fantastic today as the atom bomb did in 1943 or the hydrogen bomb in 1945.

Such developments could have incalculable strategic consequences. If the Kremlin were to get there first on any major technological breakthrough in nuclear weaponry, my conviction is that we would, in short order, find ourselves confronted with a choice between annihilation or surrender. At the very least, this is a serious possibility.

I found Khrushchev's statement of January 14 ominous in terms of its emphasis on continuing technological progress. I am sure that this statement came to the attention of many of my colleagues, but I wish to recall it here

nevertheless. In my opinion, it is a statement to be read—and reread—and pondered:

Our armed forces have to a considerable extent been transferred over to missile-nuclear arms. These arms have been perfected and will continue to be perfected. The armament which we now have is formidable armament. The armament under development is even more perfect and more formidable. The armament which is being created and which is to be found in the folders of the scientists and designers is truly unbelievable armament.

We state openly that in reducing the numbers of men in the armed forces we are not diminishing firepower. On the contrary, it has increased qualitatively several times.

Other Soviet spokesmen have gone further than Premier Khrushchev in stressing the importance of technological surprise and in hinting at the possibility of a preemptive attack. Marshal A. A. Grechko, in an article published in *Red Star* on February 23, emphasized the following points:

(a) Suddenness (or surprise) is crucial to success in modern war.

(b) Technological surprise may be equally crucial.

(c) The initial phase of the war will be of decisive importance.

(d) Soviet forces will employ nuclear weapons as their main armament.

Another Soviet marshal, Marshal Nedelin, I note parenthetically, was last week appointed "Marshal of Soviet Rocketry."

What is the "truly unbelievable" armament of which Khrushchev spoke? Let me outline some of the possibilities on the technological horizon—possibilities that can only be realized by the renewal of testing both in space and underground.

First of all there is the matter of tactical weapons. The so-called tactical rockets and cannon shells which we now possess are in reality medium-sized atomic bombs, with all the unpredictable danger of fallout. They are clumsy; they are potentially dangerous both to the user and to the civilian populace adjacent to the area of battle; they cannot be used with real discrimination. The military planners who have been working on the development of tactical nuclear weapons, have, as I understand it, been thinking of light, clean weapons with yields of from 1 to 100 tons—with a kiloton yield almost an outside figure. These weapons would be small enough to be fired from bazookas, from tanks, from weapons carriers, from light field guns, or in salvos from missile-launching trucks.

There is a limit beyond which weapons development cannot go without testing. Commenting on the semiannual AEC report, the *Washington Post* said on January 31, 1960:

The AEC report said only that weapon research and development were continuing on weapons with greatly reduced fallout but special emphasis was being placed on small rugged weapons that could be assembled and made ready to fire in a matter of minutes. One already announced is the "Davy Crockett," a one-man bazooka-launched weapon. Although it is being produced for the Army, it has not been tested yet because

of the moratorium. The Army is reported to be reluctant about ordering them in quantity before they have been proven.

The production of a clean, tactical, nuclear weapon would open the way to a whole series of technologically significant breakthroughs. By definition such a weapon would have to have a fusion warhead—that is, a heavy hydrogen or tritium warhead—which is not triggered by fissionable material or else triggered by only a minute quantity. Such an explosion would produce a small amount of carbon 14, but, compared to today's weapons, it would be 95 percent clean. The radioactive fallout would be negligible. This technique, once mastered, would be substantially applicable to warheads of all sizes, up to the multimegaton range.

It is the fissionable material in a thermonuclear bomb which makes it so extremely expensive to produce. The chemical components, chiefly heavy hydrogen and lithium, which are immediately responsible for the fusion explosion, are relatively cheap to manufacture. If a straight fusion weapon can be developed—and there is no doubt that it can—this would open up the way to the production of thermonuclear weapons of all yields in vastly increased quantities and at much smaller cost.

Then there is the matter of the neutron bomb, to which there has already been some reference in the press. Such a bomb can theoretically be produced by tailoring the energy of a fusion explosion so that, instead of heat and blast, its primary product is a burst of neutrons. Such a burst would do negligible physical damage, but it would immediately destroy all life in the target area. It would, in short, operate as a kind of death-ray.

I have heard that, in the light of present theoretical knowledge, the neutron bomb is no more questionable than the hydrogen bomb was 6 months before it was demonstrated that one could be built. Although there have been a few fragmentary references to the neutron bomb in the press, I was told, when I tried to obtain more information, that the matter was classified. When I pressed my physicist friend further, he threw up his hands in despair and said: "You must forgive me, I have never heard of a neutron."

I consider all the hush-hush that surrounds the neutron bomb to be a glaring instance of the official abuse of secrecy. To keep the facts of life on the nuclear age from the American people is foolish, and potentially disastrous. If there is a possibility that a neutron bomb can be built, if there appears to be any chance that the Soviets may succeed in building one before we do, then the American people have a right to the facts.

The current issue of *Foreign Affairs* contains a remarkable article on the question of the test ban by Dr. Freeman J. Dyson. Dr. Dyson quotes a paragraph from a report by the prominent Soviet physicist, L. L. Artsimovitch entitled "Research on Controlled Thermonuclear Reactions in the U.S.S.R.," printed in

December 1958. Let me read this paragraph, Senators, very slowly:

It may also be possible to realize a pulsed thermonuclear reaction under conditions in which the high temperature is produced by a charge of conventional explosive (such as TNT or something more powerful) which surrounds a capsule containing heavy hydrogen. Without dwelling on the experimental details, we may note that conditions have been found under which the generation of neutrons in hydrogen reactions has been established reliably and reproducibly. In experiments carried out in 1952, there is no doubt that we have observed neutrons which are formed as a result of the heating of matter to extremely high temperatures.

From this, it is apparent that the Russians were experimenting with fission-free hydrogen devices as far back as 1952 and that, as a corollary of this, they have for years had some understanding of the possibilities of the neutron bomb.

Once upon a time there was no hydrogen bomb. But there were a few scientists, a tiny but brave minority, who said it could be made and who urged that we embark on a crash program of development, lest the Kremlin beat us to it. At that time we had a President, Harry Truman, who gave the facts to the people. Had he not done so, had he not enjoyed the public support that only comes from understanding, the production of the H-bomb might have been deferred beyond that fateful day in 1953 when the Soviets exploded their own first H-bomb.

I believe President Eisenhower owes a similar duty to the American people in the case of the neutron bomb. The President should tell the people what the scientists told him. Not to do so would be a dereliction that can only lead to the most dangerous kind of speculation.

Then there is the matter of the so-called Christofilos effect, first suggested by an amateur Greek physicist and subsequently confirmed in the Argus test shot. All we know at this moment is that after the Argus shot, there was a temporary blackout in radio communications in the area due to the release of neutrons and rays at high altitude. These effects conceivably could have a revolutionary impact on modern war. They might be used by either side to interfere with the communications of the opposing side. It is not even precluded that a massive release of neutrons at high altitudes could be used to prevent missile attacks. The fact is that we do not understand the military potentialities of the Christofilos effect. Our national security demands that we learn more about these phenomena. But without tests, this is impossible.

Then there is the antimissile missile. The development of the antimissile missile by either side would have strategic implications comparable to the development of the A-bomb or H-bomb. We cannot afford to let the Kremlin get there first.

There are competent scientists and engineers, I know, who believe that, for all his genius, man will never be able to devise a missile capable of knocking down an incoming missile traveling at

a speed of 15,000 miles per hour. But I am impressed by the fact that the corps of equally competent scientists and engineers who have worked on the antimissile system for the U.S. Army are profoundly convinced that both the problem of guidance and the problem of a suitable warhead for the Nike-Zeus can be solved. Indeed, they believe that their project is far enough along to warrant the advance procurement of vital components. This, in my opinion, is sufficient reason to order full speed ahead and to provide the necessary funding without stint. Perhaps their judgment will be proved wrong. Perhaps it will be proved right. But there is so much to be gained if they are right that even at 10-to-1 odds, I would be in favor of risking the several hundred million dollars involved. Every day's delay may cost American lives if a showdown ever comes. It is not too much to suggest that delay in this area alone may cost us our freedom.

While we have been making considerable progress in the field of missile technology, we have been inclined to sit smugly on our stockpile of nuclear and thermonuclear warheads, apparently confident that, come what may, they are so fearsome that no aggressor dare challenge us. In the multimegaton field, it is not much of an exaggeration to say that we have been standing still, or almost standing still. The Soviets, I am convinced, have not been standing still. Somewhere along the line, if they run hard enough and push their clandestine tests hard enough, they may achieve a technological superiority in both strategic and defensive weapons that would make a surprise thermonuclear attack on the United States a distinct possibility.

According to expert testimony, the Soviet ICBM's are far superior in thrust to our own. This means that they can carry a much bigger cargo, so that, even with inferior technology, they have been able to arm them with warheads of substantially greater yield. According to these estimates, the Soviet ICBM's carry warheads of 5 megaton yields against the 2 megaton warheads with which our Atlas missiles are equipped.

The missile gap we confront is, by common consent, a matter for concern even as expressed in numbers of ICBM's. It becomes a matter for much greater concern when expressed in megatons. Whether we find this pleasant or not, the hard, inescapable fact remains that megatons constitute the basic currency necessary to purchase deterrence and perhaps necessary to purchase survival.

The word "megaton" has come to have an evil connotation because it is generally associated with the mass devastation of cities. But I would point out, in defense of this word, that the multimegaton weapon will almost certainly become the chief instrument for defending our own cities and our own lives against enemy attack. If we are ever attacked, an effective antimissile system alone may require thousands of multimegaton warheads; and we would need more thousands of high-yield weapons

to strike back at the hardened missile sites of the enemy.

General Powers has declared that the Soviets now have the capability to wipe out virtually all of our retaliatory capacity with several hundred missiles. In reply to this, it has been argued that it would require an average of three 5-megaton missiles to knock out the average SAC base and ten 5-megaton missiles to knock out hardened missile sites. The deduction from this is that the Soviets will never be able to afford the thousands of missiles required to reduce our retaliatory capacity to what the military people call "acceptable level."

Is it not conceivable, however, that as a result of technological improvements, the Soviets, within the next several years, will be able to develop a missile system capable of delivering a more powerful warhead with greatly increased precision? In that case, 2 missiles instead of 10 might do an adequate job of destruction on a hardened missile site or on a SAC base. If, finally, such weapons could be made compact and cheap, the arithmetic of deterrence would have to be completely rewritten.

I ask the Senators to imagine the consequences of a major technological breakthrough by the Kremlin in the fantastic, limitless horizon of nuclear weaponry. Suppose that at the next May Day parade in Moscow or at the opening of the next session of the Supreme Soviet, Prime Minister Khrushchev were to make the following statement:

Comrades, a year ago the glorious scientists of the Soviet Union solved the problem which is still baffling the scientists of the capitalist world. They produced a missile capable of knocking down an ICBM in flight. Today all the major approaches to the Soviet Union are guarded by batteries of anti-missile missiles.

Suppose, on the heels of such a statement, Khrushchev were to renew his Berlin ultimatum. What, then, would be the reaction of the free world?

We can suppose a lot more things. Suppose at the next May Day parade a division of Soviet troops marches by the reviewing stand with gun carriers, tanks, rocket launchers, and bazookas of clearly nuclear design.

Suppose that, while we concentrate on producing improved missile systems, Khrushchev one day announces that the neutron bomb has for the past 6 months been in mass production in the Soviet Union.

If any one of these things happened, we would be in immediate jeopardy. If the Soviets could time their announcements so that they hit the free world simultaneously, or salvo fashion, with the news of two or more major technological breakthroughs, then the effect would very probably be disastrous.

FALLACY NO. 4

Fallacy No. 4 is the fallacy of the "nth nation."

According to this argument, the world will be placed in serious jeopardy at the point where nuclear weapons come into the possession of the so-called "nth nation," the point, in other words, where

control becomes impossible. It is therefore of overriding importance that we conclude an agreement—any kind of agreement—as rapidly as possible.

This argument is propounded in all earnestness by sincere pacifists, by the members of the Committee for Sane Nuclear Policy, by many other people of both liberal and conservative opinion, by the Department of State, and by the British Foreign Office.

It is also propounded, with altogether different motivations, by the international Communist apparatus. The Kremlin's purpose in brandishing the menace of the "nth nation" is obvious enough: it is part of its effort to create a climate which will make it impossible for us to provide our NATO allies with nuclear weapons.

The NATO alliance is the chief target and immediate victim of the "nth nation" fallacy.

If NATO is today a sick and purposeless organization, wracked by defeatism, this, in my opinion, is due to two things: First, our one-sided reliance on massive retaliation; and second, our failure to convince our allies that we are prepared, if necessary, to fight a land war in Europe.

President Eisenhower has been indiscreet enough to inform the world that it would be pointless to try to fight such a war. But even more destructive on morale than the President's indiscretion has been our obstinate refusal to provide our NATO allies with the modern nuclear weapons they must have to be able to deter or resist an aggressive strike by the Red army. Who can blame our NATO allies if, lacking confidence both in our intentions and in their own military capabilities, they have fallen far short of the 40 divisions originally prescribed as essential for the defense of Western Europe? At his press conference of February 3, President Eisenhower said that he favored arming our NATO allies with nuclear weapons. When the Kremlin protested, the White House recoiled and announced that we had no intention of distributing nuclear arms to our NATO allies at this juncture. But this is a measure which we put off at our peril. It is a measure for today and not for tomorrow. It would do as much as, perhaps even more than, an airborne alert to increase our deterrent power over the coming critical period.

Despite their bluster, the Soviets will not be able to emulate us, because there is nothing they fear more than nuclear arms in the hands of the satellite armies. Would the Kremlin have dared to intervene in Hungary if the Hungarian Army had possessed nuclear weapons?

Since the provision of nuclear weapons to our NATO allies would, if anything, stabilize the situation and make peace more secure, and since the chances that the Soviets will share their nuclear weapons with their satellites are decidedly remote, the hypothetical danger of the "nth nation" is, I am convinced, a chimera—a chimera in the literal sense of being a mythical monster. I do not say that the theory will have no validity at some remote date in the future. But I do say that in the context of the present, it has no significant validity, and

that its only conceivable effect will be to keep NATO disarmed.

Somewhere along the line, Egypt or Israel or some other small nation may build a few nuclear weapons. We should certainly attempt to discourage this development, but I can see no ironclad way of preventing it, short of enforcing an "nth nation" ban on peaceful nuclear technology. But small nations will never become nuclear powers, and a word of caution from the only real nuclear powers would be more than enough to restrain them.

There remains the single question of Red China. In the case of China, the "nth nation" justification for accepting a test ban without adequate inspection, is doubly fallacious. It is the height of folly to believe that the conclusion of a treaty between the Big Four could persuade Peiping not to develop or test her own nuclear devices. No matter what we may do or say, Communist China, I am convinced, will explode some kind of device over the course of the next few years. It can be taken for granted that this will be the signal for an unprecedented campaign to bring Red China into the United Nations on the theory that this will make her more amenable to control. In fact, I think it is highly conceivable that the Kremlin, by arrangement with Peiping, will soon explode such a device on Chinese territory in order to accelerate the panic.

The second part of the fallacy of the "nth nation" thesis, as applied to Red China, is that the explosion of a nuclear test or two by Mao Tse-tung would place the free world in mortal jeopardy. Given her poverty, her still massive backwardness, the enormous industrial and agricultural requirements of her 5-year plans, and the fantastic cost of nuclear weapons, Red China would be accomplishing miracles if she achieved nuclear power status 20 or 25 years hence. There are two schools of thought as to whether the West or the Soviets will have the most to fear from this distant prospect. In either event, there is absolutely nothing we can do to prevent or impede this development other than pressing unrelentingly for international inspection based on complete "openness."

In the age of nuclear technology, nuclear weapons are inevitable. No great power will forever forego the right to nuclear weapons and forever resign itself to second-class status simply because the nuclear powers who were first on the scene have entered into an agreement to limit their club to a total membership of three.

We must free ourselves from the tyranny of the chimera of the nth nation.

The sharing of nuclear arms with our NATO allies will decrease the danger of war by putting some modern military muscle into NATO, by making NATO meaningful, by giving our allies confidence in NATO and confidence in our own intentions. It would simultaneously provide us with greatly increased leverage in pressing for "openness" in our proposals on disarmament and the test ban.

FALLACY NO. 5

The fifth fallacy is the fallacy that underground tests and tests at high alti-

tude and in space, are detectable and verifiable.

Even the most ardent test ban advocates admit that under the best of circumstances, many tests could go undetected, and that, after detection, there would still be a formidable job of establishing proof. They argue, however, that it would be adequate to have a 1 in 5 or even a 1 in 25 chance of verification. A significant possibility of detection, according to this point of view, would be sufficient to deter any government from attempting a sneak violation of a test ban treaty.

In an age that is already notorious for its political folly, there has been no concept more fallacious than that of the enforceable ban. The hearings held by the Joint Committee on Atomic Energy from April 19 to 23 have, in my opinion, reduced the entire concept to a rubble of nonsense.

I believe the free world owes a great debt to the distinguished Senators and Representatives who organized and participated in these hearings. I wholeheartedly agree with Arthur Krock's statement in the New York Times of Sunday, April 24:

The hearings ordered by the Joint Committee was an act of statesmanship, as well as service to its high responsibility for national security in the nuclear field.

The four volumes of evidence are, unfortunately, still in transcript form. I hope it will not be too long before the Joint Committee can make available to Congress and to the general public its printed record of these historic hearings. I consider the wide distribution of this record so vital that I think it might be possible to get out a paper-back edition.

The committee brought before it as impressive an array of scientific brains as had ever appeared in a congressional committee room. There were those who favor a test ban treaty, while admitting that it contained many elements of uncertainty. And there were those who were convinced that no system of inspection could be devised that offered anything better than a marginal hope of detecting and verifying a concealed test shot.

None of the scientists questioned the "big hole" theory, which was originally developed by Dr. Albert Latter of the Rand Corp. While the higher mathematics that go into the theory are beyond most of us, in essence the theory constitutes the kind of scientific common sense that a nonscientific layman like myself can appreciate. Let me explain it in my own way: If one simply tamps an atomic charge into a hole in the ground and shoots it off, he will get a seismic signal that is roughly proportionate to the magnitude of the explosion. If, on the other hand, one explodes a test shot in the center of a large spherical cavity, the surrounding air muffles, or decouples, the explosion so that one gets a much smaller seismic signal. If the hole is made large enough, the seismic reading can be reduced by a factor of 300, which means that 300 tons would register as 1 ton.

By their joint calculations, Dr. Latter and Dr. Bethe have demonstrated that,

in a spherical cavity 500 feet in diameter a 20-kiloton device—that is, a device equal to 20,000 tons of TNT, which was the size of the Hiroshima bomb—would produce a seismic signal equal to that of 70 tons of TNT. Unless the seismograph were close in, this would produce no more than an imperceptible wriggle in a seismic reading.

The original Geneva agreement of 1958 had been based on the assumption that an international network of 180 stations, which would include 21 stations in the Soviet Union, would be adequate to detect tests to 5 kilotons. Later this was amended to read that the system would be adequate for detection of seismic readings of greater than 4.75. This would be, roughly, equivalent to the explosion of a 20-kiloton bomb.

I must say a 20-kiloton bomb could not have demolished the Geneva agreement more completely than did the "big hole" theory.

The debate that took place between the scientists representing the two points of view makes highly interesting reading.

Dr. Hans Bethe, Dr. Roberts, and some of the other scientists who favored compromise said that while the "big hole" theory was unchallengeable as theory, it was questionable whether it would ever be translated into practice. Apart from the general agreement on the "big hole" theory, their opinions were challenged at virtually every other point by Dr. Edward Teller, Dr. Latter, Dr. Brown, and some of the other scientists who testified.

The first group said that a hole of 500 feet in diameter could only be excavated by running water through an underground salt deposit; that such an operation would cost \$50 million, which would make it prohibitive in price; that salt deposits of the necessary cubic volume and deep enough underground could be found only in a very limited number of places; that such a cavity could not be excavated without detection of the human activity in the area and of the increased salinity in the adjacent waters and soils.

The second group pointed out that one salt dome of 500 feet cubic diameter already does exist in the United States; that limestone deposits, which are very widely distributed, also lend themselves to the construction of big holes; that a 500-foot hole could probably be built for much less than the estimated \$50 million, but even \$50 million was not a prohibitive sum when equated against the cost of a nuclear-weapons program, and when it is assumed that the cavity could be used over and over again; that in a totalitarian state human activity was highly concealable; that any increase in salinity would dissipate rapidly.

Finally, they pointed out that the hole need not be 500 feet in diameter—this is the size of the hole needed to decouple a 20 kiloton explosion effectively. To take care of a 1 kiloton explosion—and at this level a considerable amount of really significant testing can be done—would require a big hole only one-twentieth the size. This would involve a very simple exercise in engineering and would reduce the cost to no more than several million dollars per hole.

They argued further that, at the 1 kiloton level, it would be possible to conduct tests inside a specially constructed container—perhaps disguised as a factory.

Having argued at every point in support of the feasibility of an adequate detection system. Dr. Bethe went on to agree that the discovery of the decoupling technique made a more extensive detection network imperative. As I have pointed out previously, he proposed a system involving 21 manned stations, 600 robot seismic stations, and 300 onsite inspections per annum.

Dr. Bethe said that the installation of his proposed grid of seismic stations at 125 mile intervals would provide a 300 times greater sensitivity than the original Geneva network, which would compensate for a potential decoupling factor of 300. With the proposed network, therefore, it would still be possible to detect explosions of greater than 20 kilotons magnitude.

The scientists on the other side of the table challenged this argument on two scores. First, they said, it was naive to believe that the Kremlin, which has not yet agreed to the installation of a single station, could be talked into accepting 600 stations. Secondly, they pointed out that while Dr. Bethe's network might take care of a decoupling factor of 300, the technology of decoupling and of cheating in general was still in its infancy. It was suggested, for example, that a greatly increased decoupling factor could be obtained by surrounding the nuclear charge with several tons of graphite. When the charge went off, the graphite would be vaporized and the great heat required to produce vaporization would sap much of the energy of the explosion and reduce its seismic impact.

Dr. Roberts and others argued that it was theoretically possible to distinguish the seismic signal of an earthquake from that of a nuclear explosion and that the technique of obtaining and reading seismic signals might be improved by a program of research. Dr. Harold Brown of the Lawrence Radiation Laboratory stated that initially it had been believed that only a small percentage of the continental earthquakes which occur would produce seismic signals which did not clearly identify them as earthquakes.

On the basis of our experience in the Hardtack tests of 1958, however, Dr. Brown declared that, of the 5,000 or more continental earthquakes per year which produce seismic signals equivalent to a 1 kiloton explosion or greater, "only a few percent could be identified by the seismic signature method." This, he said, "left many thousands throughout the world which could then be suspected of being nuclear explosions of between 1 and 5 kilotons and about 100 which could be suspected of being nuclear explosions of 5 kilotons or more." Actually, I am told these statistics on earthquakes are conservative. There probably are tens of thousands. Even if we were to accept Dr. Bethe's estimate that 90 percent of the earthquakes could be identified by their seismographic signal, it would still leave many hundreds and

perhaps thousands of seismic disturbances that could not clearly be identified as such.

Dr. Brown and others pointed out that the earth is a noisy medium, that it is extremely difficult to filter out background noises produced by trains or trucks or other man-made disturbances or by pressure changes in the atmosphere, or by waves beating on the shore. If the first upward motion on the seismograph, which might be expected from a nuclear explosion, is lost in the background noise, then the second motion on the chart, which is downward, would appear to be the first motion—and under these circumstances, the conclusion would be that the signal had been caused by an earthquake.

Dr. Brown pointed out that seismic signals could be confused or forged by simultaneously detonating large quantities of conventional explosives in some legitimate engineering enterprise which the Soviets might demonstratively open to public inspection.

Finally, the scientists pointed out that the Kremlin could achieve complete seismic concealment by setting up their test shots so that they would be triggered by seismic shocks of considerably greater magnitude. This would be an extremely simple arrangement, and there are enough natural earthquakes occurring each year to enable the Kremlin to run off such test shots to its heart's content. The debate went on and on and on, in this manner. I found the reading of the arguments on both sides fascinating. But I feel that the entire argument was rendered completely irrelevant by the two points on which the opposing sides agreed.

Point No. 1 is that even if the impossible did happen and the Kremlin agreed to 21 manned and 600 robot seismic stations plus 300 annual inspections, this would only provide us with the capability of detecting blasts of greater than 20 kilotons magnitude. Even with today's technology—and this technology will be improved—tests of far less than 20 kilotons magnitude could be extrapolated in designing improved weapons systems covering virtually the entire nuclear and thermonuclear spectrums.

Point No. 2 is that, even given the Bethe network, and even given the maximum conceivable improvement in methods of detection, there is a threshold below which no detection—let alone verification—would be possible. This threshold was estimated at approximately 1 kiloton. A kiloton blast, decoupled or reduced, by a factor of 300, becomes the equivalent of only 3 tons of TNT. What this signifies is that there will never be any method of detecting nuclear explosions in a range that covers virtually the entire projected spectrum of tactical nuclear weapons.

If these two points are true, what conceivable purpose is there to arguing about our ability to detect tests of greater than 20 kilotons magnitude?

It would be bad enough if this entire irrelevant argument had been confined to the hearing room of the Joint Committee on Atomic Energy. But it seems to me that the President and State Department have now bogged down in this

grotesque and utterly irrelevant argument. And, in doing so, they have, unwittingly, helped the Kremlin to befuddle Western public opinion completely.

Perhaps I am obtuse or just plain unscientific, but for the life of me I see no point to a detection system which would cost several billion dollars to install and probably another billion dollars per year to operate, and which would still leave the Communists free to sneak test any device up to the size of a Hiroshima-type bomb.

But we have not yet come to the end of the nonsense. Dr. Bethe's proposed enlargement of the system would not in any way take care of test shots released over remote ocean waters, perhaps in the proximity of the Antarctic. With the Soviet Union and the United States both building missile submarines with nuclear propulsion, the vast stretches of the world's oceans are to be "inspected" by only 10 ship stations. What way would there be of preventing a Soviet submarine from surfacing in a remote area, firing a test shot, taking its observations, and then submerging for a long underwater trip back to its home station? We might detect such a shot—but how could we possibly prove, in the absence of a corpus delicti or a captured submarine, that it had been fired by the Kremlin? If we wanted to police the seas on a scale that would make inspection meaningful, it would probably cost additional billions of dollars per year.

If the discussion on detection capabilities was irrelevant, the debate on verification was doubly irrelevant. Verification would require the production of material evidence in the form of a radioactive core of rock.

Again I may be obtuse or unscientific, but what conceivable point is there to discussing the pros and cons of verification if one cannot even detect a test shot of less than 20 kilotons magnitude? There may be a flicker of hope that with thousands of stations, signals might be obtained indicating a test ban violation above a threshold of, let us say, several kilotons. But it is one thing to suspect a violation, and another thing to prove in a legally valid form that a violation has occurred. And, as I see the matter, the proof would have to have legal validity before we could cancel the treaty or ask for sanctions against the violator.

I should like, nevertheless, to summarize some of the testimony on verification that was given to the Joint Committee, because it all helps to demonstrate what a monstrously fallacious thing the so-called enforceable test ban is.

Although the scientists varied in their estimates, all of them agreed that verification was an exceedingly complex problem and that the mathematical odds were in favor of a determined and enterprising cheater. Several of the scientists estimated the odds against verification at 100,000 to 1.

The distinguished Senator from Tennessee has pointed out that in the case of the Rainier test shot, even though we knew the exact underground point at

which the shot had been exploded, it required 3 months of drilling to come up with a radioactive core. But let me summarize for your amusement some of the complexities of the problem of verification as described to the Joint Committee.

Let us assume the inspection system is set up and a station at point X receives a seismic signal which cannot clearly be identified as an earthquake. Depending on the spacing of the stations, it would be necessary to carry out a minute examination of some 100 square miles to 500 square miles of Soviet territory. The first surveys would be aerial surveys utilizing all types and sizes of aircraft, ranging from helicopters to multiengine, fixed-winged craft, and flying at survey altitudes ranging from 150 feet to 18,000 feet. The aerial reconnaissance would involve first, visual observation; second, photography; third, radiation, magnetic, electromagnetic, and infrared surveys.

Obviously, the first task of the aerial survey would be to determine whether or not the seismic event was an earthquake, or a nuclear explosion. A nuclear explosion might produce a fissure in the ground if it were not down deep enough—but this is a possibility we can rule out. There might be some metallic debris or other signs of human activity if the Communists were careless—but I believe that this is a possibility we can also rule out.

So, the aircraft flies over this suspected area. The inspectors find no signs of human activity, and their sensitive instruments pick up no surface evidence of an explosion. On the other hand, there is physical evidence that a genuine earthquake has occurred in this area. What do the inspectors do at this point? Do they call off the search and write off the seismic signal to a genuine earthquake? Or do they take the quite realistic stand that the earthquake may have been used as a shield for a test explosion? In the latter case, every suspicious seismic event would involve detailed inspection over a large area, by air, on the ground, underground, and under water.

According to the most optimistic estimates, it would be possible, by means of such techniques, to narrow the area of suspicion down to one-half of 1 square mile and ultimately to a radius of 500 feet. Then drilling would commence. The smaller the test shot, the greater the difficulty of location. According to Dr. C. E. Violet, of the Lawrence Radiation Laboratory, the probability of locating radioactive debris from a 1.7-kiloton explosion would be approximately 1 in 100,000. To make the probability 1, or equal to unity, he said, one would have to drill 100,000 holes. A far more optimistic estimate was presented by Dr. Richard M. Foote, of Stanford Research Institute. Let us examine this "optimistic" estimate.

If the area of suspicion could be cut down to 500 feet in radius, it would require only 63 drill holes, in triangular grid pattern, to insure 100 percent completeness of search. The tables present-

ed in connection with this "optimistic" estimate are "enough to make a cow laugh"—to use a favorite expression of Comrade Khrushchev. The drilling of 63 holes would involve a total footage of 75,600 feet. This, I would point out, is the equivalent of three Mount Everests. At a cost of \$5 per foot—exclusive of all mobilization costs—this would work out to \$378,000. Working three shifts a day, it would require 1,008 man-days of drilling and this, mind you, simply to carry out one inspection of one undetermined seismic disturbance. If one were willing to settle for a 1-in-10 chance of verification, fewer holes would be necessary.

At this point, Representative DURHAM made the apt comment:

If you had about 10 seismic disturbances and had to inspect them on the basis of what you told us here, you probably would have full employment in most of the country.

I am afraid that this employment would not be limited to our skilled and unskilled workers. To carry out 300 such onsite inspections per annum would probably require several entire graduating classes of seismologists, geologists, and of scientists and engineers in the critical field of nucleonics.

If the probability of detection is 1 in 1,000 and the probability of verification is 1 in 1,000—and these are far from being the most conservative estimates—then the combined probability of detection and verification is 1 in 1 million. If the combined probability figure were a thousand times smaller than this, it would still be preposterous. It would be bad enough if it were simply a matter of absurdity. But, as I have pointed out previously—and as I want to emphasize again—these estimates of probability become utterly irrelevant when you consider that they apply to tests of greater than 20 kilotons magnitude, that below this level, no detection would be possible.

How ridiculous can we get?

As for tests in the lower reaches of space or in outer space, all the evidence points to the conclusion that the Soviets would be able to conduct such tests with impunity even with devices of considerable size. As everyone knows, our Argus shot went completely undetected.

Let us assume that the Geneva network is installed in the Soviet Union and that a clandestine 100-kiloton test shot is fired at an altitude of several hundred miles somewhere in the northernmost reaches of Siberia on the fringe of the Arctic Ocean. Light-measuring instruments, if stationed close enough, might detect the explosion. But if the shot were fired against the background of a brilliant display of the aurora borealis, how could we ever prove that the transitory flicker registered by our light instruments was not actually caused by a sudden brilliant burst of the aurora? There might be electromagnetic disturbances similar to those which caused the temporary communications blackout after the Argus shot. But if the shot were fired at a period of considerable sunspot activity, how could we ever prove that the sunspots had really not been responsible? No matter how great

our suspicions might be, in the absence of radioactive debris there would be no way of clinching our case against the cheater.

It is time that we put an end to all this sorry exercise in futility and irrelevance.

It is high time—it is past time—that we presented the facts to the American people.

It is time that we woke up to the fact that these protracted negotiations are part of the conflict strategy of the Soviet rulers—that they have used these negotiations first, to impose a moratorium on nuclear weapons testing by the United States; second, to intensify the international propaganda in favor of a total test ban, without inspection or with inadequate inspection; third, to create a condition of international hysteria which would restrict or prevent the possibility of effective Western reaction to aggression.

It is time we realize that the extension of the moratorium is a deadly serious business—that a single, major, technological breakthrough by the Soviet scientists who have produced the A-bomb, the H-bomb, and the sputnik, may confront us with a choice between enslavement and annihilation.

On February 11, President Eisenhower submitted to the Soviet Government a four-point plan for ending the deadlock in the nuclear test ban negotiations. His proposal called for an immediate ban, under assured controls, of all nuclear weapons tests in the atmosphere and in the ocean, of space tests up to altitudes where effective controls can function, and of underground tests above a seismic magnitude of 4.75.

It also called for a joint program of research and experimentation, and offered to extend the ban systematically to remaining areas underground as adequate control measures were devised.

I favor the proposal of an immediate, complete, and unconditional ban on the several categories of tests that result in atmospheric contamination. Such an agreement could have gone into effect without delay since such tests are easily monitored, whereas the detection of even very large underground tests, of tests in space, and of tests over remote ocean areas, requires the establishment of extensive monitoring facilities.

By and large, however, the President's plan was a good one. It was a simple, straightforward proposal on an issue of vital importance to the whole of mankind. I agree with the President that, had the Soviets accepted this proposal, it might ultimately have paved the way for a much broader agreement on disarmament.

But, instead of accepting our proposal, the Kremlin responded with a diplomatic ploy. It announced that it was prepared to "accept" the President's proposal to ban all major tests of nuclear weapons if the West would sign a pledge not to conduct any nuclear tests, big or small, for a number of years to be decided by negotiations. A period of 4 years was suggested. Among other things, it specifically "accepted" the President's pro-

posal that during the period of the moratorium, a joint program of research would be carried out for the purpose of improving detection capabilities.

At the time it was made, the Soviet counterproposal was hailed as a concession to our point of view. For the life of me, I cannot understand why. In my opinion, their counterproposal constituted an act of international blackmail, and we should have called it this. It was as though the Kremlin were pointing a pistol at the head of mankind and saying to us: "We refuse not to contaminate the atmosphere—unless you agree to a moratorium on undetectable underground tests, which do not contaminate the atmosphere, but which might conceivably add to your defensive capabilities."

The Soviet counteroffer conceded nothing. It was merely a rehash of the old Soviet position, substituting the concept of a voluntary moratorium for that of a formal ban on small underground tests. But instead of exposing it for the fraud it was, the President suggested that the Soviet offer was indicative of a sincere desire to come to terms; and Ambassador Wadsworth issued a joint communique with the Soviet and British representatives which carried the strong implication that the Kremlin had accepted the American proposal with certain minor modifications.

The distinguished Senator from New Mexico [Mr. ANDERSON] deserves the thanks of all of us for immediately denouncing the Soviet offer as a "phony" and for the incisive analysis which he presented to the Senate on March 22. We are equally in the debt of the Senator from Tennessee [Mr. GORE] for the dignified but forthright manner in which he raised the matter of the joint communique and explained to Ambassador Wadsworth that, in signing it, he had made an unwitting contribution to the Soviet propaganda campaign.

But Senator ANDERSON's eloquent warning fell on deaf ears. On March 22, the very day on which he spoke in the Senate, there took place a meeting of the so-called Committee of Principals—Secretary of State Christian Herter, Allen Dulles, George E. Kistiakowsky, the President's science adviser, Atomic Energy Commissioner McCone, and Deputy Defense Secretary Douglas, sitting in for Secretary Gates. According to an article by Mr. Chalmers Roberts in the Reporter for April 27, the Committee of Principals, with only Commissioner McCone opposing, decided in favor of conditional acceptance of the Soviet counterproposal.

According to Mr. Roberts, the joint communique issued by President Eisenhower and Prime Minister Macmillan on March 29 from Camp David was based largely on the agreement reached by the Committee of Principals on March 22. In the Camp David communique, the two heads of government said that they had agreed that, once remaining issues had been resolved and a treaty signed, "they would be ready to institute a voluntary moratorium of agreed duration on nuclear weapons tests below that threshold—4.75 on the seismic instru-

ments—to be accomplished by unilateral declaration of each of the three powers."

This statement contained two vital concessions to the Soviet point of view. By implication, it extended the scope of the proposed test ban treaty to cover undetectable tests in space. In this respect, and in consenting to a moratorium on undetectable underground test shots, we abandoned the cardinal principle of enforceable inspection which has thus far guided us in our negotiations on disarmament and the test ban. In my opinion, it constituted the single most catastrophic retreat since the inception of the test ban negotiations.

I agree wholeheartedly with Mr. Arthur Krock's statement in the New York Times of March 31:

The response of the President and the British Prime Minister to Soviet Russia's latest nuclear disarmament proposal gave Premier Khrushchev what he wanted.

Because of the softness and lack of understanding which the administration had displayed on the test ban issue, this has become the area of greatest danger at the forthcoming summit conference. But I feel that the hearings recently held by the Joint Committee on Atomic Energy provide the administration with every justification for reconsidering its position.

With all the earnestness at my command, I would urge the President and the Department of State to give the most serious consideration to the testimony of Dr. Bethe, Dr. Teller, Dr. Romney, and the other scientists who testified before the Joint Committee. In the light of this testimony, I consider it mandatory that we free our hands to resume tests that are not subject to detection and do not contaminate the atmosphere—at the very least to resume small underground tests.

I do not think the Administration need feel in the least embarrassed over revising its stand at this point. The original moratorium was based on the belief of competent scientific advisers that an adequate system of detection and verification could be devised. On the basis of the most recent scientific testimony, it is now apparent that the chances of developing such a system are exceedingly slim—certainly it is not something that can be counted on within the next decade.

In theory—despite our recent concessions—we still adhere to the position that any agreement on testing must be based on a truly enforceable system of inspection. We would be acting in consonance both with this principle and with recent scientific evidence if we now reverted to the President's eminently sensible proposal of February 11.

I believe that the fate of our country and the fate of the entire free world community may hinge upon our early resumption of underground nuclear testing. Every day of delay cuts down our nuclear technological lead over the Soviets. It is not inconceivable that, as a result of our voluntary 2-year moratorium, they have already caught up with us and surpassed us at a number

of points. Heaven knows what will happen if the moratorium is now extended for another year or 2 years—with or without a formal treaty.

FALLACY NO. 6

Fallacy No. 6 is that the cessation of nuclear tests will, ipso facto, result in a relaxation of the dangerous tensions that have grown up in the world. This fallacy we can dispose of in a few minutes because that is all it deserves.

The Conference of International Experts on Nuclear Test Detection took place in Geneva in the summer of 1958. While the conference was still in progress, and after it became apparent that the West was yielding and that a joint statement on agreed findings would be issued, the Quemoy-Matsu crisis erupted.

On October 31, 1958, the United States exploded its last nuclear test shot and announced to the world that it was embarking on a voluntary 1-year moratorium, while the possibilities of a test ban were being further explored with the Soviet Union. Simultaneously, the Soviet Government embarked—or announced that it was embarking—on a reciprocal moratorium.

Exactly 4 weeks later, on November 27, 1958, Khrushchev promulgated his famous Berlin ultimatum. The 18 months that have elapsed since the ultimatum was issued have witnessed a whole series of missile-rattling perorations by Mr. Khrushchev, the bloody riots in the Panama Canal Zone, the establishment of a quasi-Communist regime in Cuba, and stepped up activity by the Communist Parties throughout the free world.

This is the relaxation of tensions which we purchased with our voluntary moratorium on nuclear tests. I do not consider this sequence of events accidental. I am not surprised by them. It is only natural that the Communists should have been emboldened by their success in bludgeoning us into a nuclear test policy, the folly of which was eloquently described by both President Eisenhower and Secretary of State Dulles in statements made as late as the end of 1957.

My prediction is that, if we now formalize the moratorium by entering into a test ban treaty with inadequate inspection, the Kremlin will again be emboldened, and will become more demanding, not less demanding.

FALLACY NO. 7

Fallacy No. 7 is the oft-repeated statement that in the course of the Geneva negotiations the Russians have conceded far more points than have the West, that they have shown a genuine desire to reach agreement, that the two sides have already arrived at an agreement on all but 4 or 5 of the 17 articles of the treaty—and that an agreement on an enforceable test ban is, in fact, just around the corner.

It is entirely true that the Soviets have made concessions on a number of points—even on many points. But these concessions have always been on points of secondary importance. On the really basic question like the number of onsite

inspections per annum, they have shown themselves absolutely adamant.

Let me give one example of the great concessions the Soviets have made. When the "big hole" theory was first presented to them at Geneva by Dr. Bethe, the Soviet delegates denied its validity. The "big hole" theory, however, is something that can be demonstrated mathematically in a black-and-white manner and which has also been verified in recent tests conducted with conventional explosives. After a period of resistance, the Soviet delegation finally abandoned its opposition to the "big hole" theory, but without specifically accepting it. This was just as if they had agreed not to argue against the proposition that two plus two equals four—but without specifically agreeing that it does.

Dr. Bethe and some of our columnists hailed this as one of the most significant of the Russian concessions and as another indication of their genuine desire to compromise. I am not a scientist but I have had some experience with facts. Consequently, I find Dr. Bethe's logic here very difficult to follow.

Compared with the altogether minor concessions which the Soviets have made on a number of points, the West has made three concessions of fundamental importance.

Our first major concession, was our agreement—in violation of everything we had previously said—to consider the questions of nuclear testing in isolation from the general problem of disarmament.

The second major Western concession was our agreement to extend the test ban treaty to cover undetectable tests in outer space. This, again, constituted a violation of our fundamental position that there should be no disarmament of any kind without enforceable inspection.

Our third major concession, and in my opinion potentially the most disastrous, was our submission to the Russian demand that the conclusion of the treaty be accompanied by a voluntary moratorium or, to be exact, by the extension of the already existing voluntary moratorium on undetectable underground tests.

It is true, too, that agreement has been reached on some 12 or 13 articles of the 17-article treaty. But the articles on which no agreement has yet been reached constitute the heart of the treaty. Let me quote the comment of the Washington Post on April 20:

In its present form, the incomplete treaty is like an automobile with a chassis, wheels, transmission, body, dual controls, upholstery, and trim. Missing from it is the engine, electrical system, and fuel.

Finally, it may also be true that a test ban treaty is just around the corner. But, if a test ban treaty does come into being, in the light of present attitudes and of the Camp David pronouncement I believe we can safely predict that it will not be the kind of test ban agreement about which we were talking 1 year ago. It will not, in short, be a test ban agreement in which our national interests are protected by a system of enforceable inspection.

FALLACY NO. 8

The eighth fallacy is the thesis, exceedingly popular after the first Geneva conference, that the question of a test ban can easily be resolved if we simply turn the problem over to the scientists on both sides.

According to this fallacy, the scientists at Geneva, who came together unencumbered by political prejudice, had no difficulty in arriving at a meeting of the minds. The conference was conducted in an atmosphere of openness and cordiality; and there emerged from it an honest agreement on the guiding scientific principles for a test ban agreement.

The true story of what happened at the Geneva conference is very far from the romantic idyll which was presented to the press of the world.

In checking through the documents pertaining to the conference, the first thing that strikes one is the almost indecent haste with which we rushed to get to Geneva. Here was a projected conference of extraordinary complexity, in a field where there was virtually no body of experience to serve as a guide. But the delegation to the conference, consisting of 3 senior scientists and some 20 technical advisers, was thrown together, briefed, and dispatched to Geneva all within a period of a few weeks.

The picture of idyllic apolitical relations which were supposed to have existed at the conference, was badly punctured by the recent testimony of the American scientists to the Joint Congressional Committee on Atomic Energy. Let me quote a few items from these hearings.

Dr. Wolfgang H. Panofsky, High Energy Physics Laboratory, Stanford University, told the committee:

After the report of the 1958 conference of experts was filed with the governments of the three countries, all of them (including the United States) formally accepted the report. As a result, the U.S.S.R. delegations like to refer to the report as a formal agreement on technical facts rather than as a technical working paper. In so doing, they propose that the experts' report is an unchangeable point of departure for the political negotiators. On the other hand, the United Kingdom and United States delegations have assumed that the technical facts should be brought up to date to reflect changes in our knowledge.

Dr. Harold Brown, Deputy Director of the Livermore Weapons Laboratories, made this commentary on the behavior of the Soviet scientists.

On a number of occasions, I have seen them [the Russian scientists] accept something in private scientifically, or at least appear to accept it scientifically, and then come back for the record with quite a different attitude. There is always a technical explanation. Sometimes it holds almost no water. Sometimes it is quite fallacious. Other times there is some basis to what they say.

Dr. Brown went on to say:

No conference of experts' report can logically be criticized for not taking adequate account of the self-evident fact that a violator of a treaty or a moratorium on nuclear weapons tests must be expected to take full

advantage of whatever methods he can find to reduce the probability of detection.

One can say, looking back, that perhaps not enough attention was paid to them (the difficulties of detection) particularly in such items as the possibility of very large decoupling, the difficulties of on-site inspection, and the possibilities of shielding explosions in space.

I cannot conclude my comments on the fallacy of the scientific idyll at Geneva without some reference to Dr. Hans Bethe, the chief adviser on nuclear testing to the President's Scientific Advisory Committee.

Dr. Bethe is one of the greatest living theoretical physicists, and, as a man of science I have nothing but respect for him. He has the good and the bad qualities of the theoretical physicist. He is by reputation stubborn in his convictions, but willing to listen to demonstrable evidence when he is proven wrong. Unfortunately, Dr. Bethe's predictions in the field of science have frequently been wrong, and his predictions in the fields of technology, military science, and politics have fared even worse.

In the immediate postwar period he frequently declared that the Soviets would not get the atomic bomb for decades. Before the H-bomb, he took the stand that it could not be made and should not be made. And when we developed the hydrogen bomb, he was just as emphatic in his declaration that the Soviets would never discover the secret for themselves. Before the big hole theory was developed by Dr. Albert Latter, Dr. Bethe had declared that decoupling was impracticable. After Latter had developed his theory, Dr. Bethe was big enough to examine and confirm the validity of the theory. In the light of this new knowledge, Dr. Bethe was also realistic enough to propose a substantial enlargement of the original Geneva detection network. But, in proposing it, he came up with the proposition that it was possible to construct completely tamperproof instruments and communication lines for his network. Experts with whom I have discussed the matter tell me that to this date no such thing as a completely tamperproof mechanical device has yet been produced. Nor did Dr. Bethe offer any suggestions.

On the basis of such a record of error on vital matters, what value should we place on the political sagacity of Dr. Hans Bethe?

At this hour of peril, how much reliance can the Nation place on the ability of the President's chief test ban expert to accurately forecast the course of future events in science or in politics?

THE QUESTION OF FALLOUT

There is another argument that used to play a central role in the antitest-ban agitation: That is, the danger of fallout. I have not listed this as a fallacy because once upon a time this argument had some validity. According to the most recent findings, the danger is substantially less than was previously believed, but it is real, nevertheless. But fallout is no longer an issue. No one proposes the resumption of tests that contaminate the atmosphere.

Such tests, in my opinion, will not be resumed by either side, even in the absence of a formal treaty. The only question at issue today is whether we should leave ourselves free to conduct tests that do not contaminate the atmosphere and that are essential to our national security.

OUR PRESENT POSITION, AND A PROPOSAL FOR ACTION

Now that I have examined the major fallacies of the proponents of the nuclear test ban, I should like, in closing my remarks, to reexamine our present situation and to suggest the outline of a positive plan of action.

I realize, of course, that it is not enough to point to dangers and to criticize. A purely negative approach on the question of nuclear testing could have disastrous propaganda consequences. But we do not have to be negative. I am convinced that, if we give the facts to the people of our own country and of the other free countries, we shall be able to carry the propaganda offensive to the Kremlin. Let me suggest the outline of such an approach.

First. We inform the Soviets that in the light of recent scientific testimony, an adequate inspection system for underground tests, based on fixed stations, would present virtually insuperable technological difficulties, would be prohibitively costly, would if installed, provide no means of detection for tests under 20 kilotons magnitude.

In the light of this testimony, it is obvious that there would be only one way of effectively policing an agreement banning all categories of tests. This would be the acceptance of the principle of complete openness by both sides. We, therefore, propose a test ban based on President Eisenhower's "open skies" proposal, plus unlimited right of ground inspection, and policed in each country by a stated number of aircraft and inspection teams enjoying complete freedom of movement.

Second. If the Soviets do not accept our proposal for a complete test ban based on "open skies" and unlimited rights of inspection, we propose, as an alternative, an immediate ban on all tests that contaminate the atmosphere. We point out that an agreement on this simple but basic proposal would respect the opinions of mankind, would be easily monitored, and would at the same time, pave the way for further and broader agreements.

Third. If the Soviets, in turn, reject our proposal for a worldwide ban on "dirty" tests, we announce that we ourselves will voluntarily observe a moratorium on such tests. We express the hope that the Soviets will also observe a voluntary moratorium in the absence of a formal agreement—but we warn that, if there is ever conclusive evidence that the Soviets have resumed such tests, then we shall have to reconsider our own position.

Fourth. We announce our willingness to extend the ban to other categories of tests, if, as, and when enforceable methods of inspection are developed.

Fifth. We leave ourselves free to resume tests in space and underground.

Sixth. We commit ourselves, with testing again possible, to an all-out program of nuclear weapons development, conceived on a scale that will not merely maintain our lead over the Soviets but will increase it from year to year. This program must be continuous. We must not again rest on our laurels—as we have done under both Democratic and Republican administrations—when we reach the next technological plateau.

Seventh. We declare our intention (a) to embark on a so-called "plowshare" program—that is a program of research on hydrological and geographic engineering and on other peaceful uses of nuclear explosions, (b) to appropriate \$100 million for this program of research, (c) to use our underground weapons test program, insofar as this can be done, to further our "plowshare" program, (d) to disseminate freely all information resulting from this program.

Eighth. We commit ourselves publicly to announce all tests.

Ninth. We act immediately on the President's suggestion of February 3 that we arm our NATO allies with nuclear weapons. Nothing would do more to reinvigorate NATO or to persuade its member nations of the seriousness of our intentions.

Tenth. Recognizing the fact that nuclear physics is not an American monopoly, that Italian, Hungarian, German, Danish, and other scientists all played an important role in the development of the atom and hydrogen bombs, we call for and offer to participate in a joint NATO effort in nuclear weapons development. Such an enterprise would not be designed to replace our own facilities, but to cooperate competitively with them. Nothing would do more to tighten our alliance and to challenge the Russians. The existence of such NATO-wide research facility would also add to our leverage in pressing the Kremlin for "openness."

On May 7, the President stated that we will resume underground nuclear testing, presumably by the end of the year. This declaration was hailed by many as a welcome reversal of policy. But his statement leaves much unanswered and even more undone.

It commits us to limit the new test series to nonmilitary devices—when the crying need is for underground tests of new warheads and new devices designed to provide our land forces with tactical nuclear weapons and our defenses with antimissile capabilities.

It still leaves us committed to the offer made in the Camp David communique of May 29. This called for (1) a treaty banning not only detectable tests in the atmosphere, underwater, underground, and at high altitudes, but also banning undetectable tests in space; and (2) a moratorium on undetectable underground tests while a research program on improved methods of detection was carried forward.

It ignores the fact that with each new extension of the moratorium—no matter what we may say about our intentions at the end of the stated period—it becomes psychologically more difficult to renew testing.

In the war of propaganda, the Communists have used the test ban issue to place the West on the defensive, and to create a condition of international hysteria which would restrict or prevent the possibility of Western reaction to Communist aggression. They have been able to place us on the defensive for the simple reason that we have not given the facts to the American people and the people of the free world. The President's statement of May 7 still does nothing to give them the facts.

The President's statement still leaves us without a positive program that would enable us to carry the propaganda offensive to the Communists.

The President's offer of March 29 already conceded far more than should have been conceded. His statement of May 7 strongly suggests the conclusion that at the forthcoming summit conference it will be used as a bargaining device, and that our offer of March 29 may now be regarded only as an opening position which will be further compromised.

In the light of Khrushchev's recent conduct, in the light of the Berlin ultimatum, in the light of the situation in Cuba, and the many other evidences of aggression and subversion, what possible justification can there be for a continuation of the moratorium on underground tests—with or without a treaty banning tests in detectable media?

For my own part, as I have stated previously, I believe it can be taken as a virtual certainty that the Kremlin has not been observing a corresponding moratorium, and that it will not do so if a treaty is signed.

If the Administration does not accept this point of view, is it prepared to assure the American public that the Kremlin—its opposition to inspection notwithstanding—has honored the moratorium and will continue to do so? And if it cannot offer this assurance, on what grounds does it justify the extension of the moratorium?

By our exclusive reliance on the doctrine of massive retaliation; by our failure to concentrate on the development of clean tactical nuclear weapons as the chief means of offsetting the Communist superiority in manpower; by our failure to arm our NATO allies with the nuclear arms that are available; by our voluntary 2-year moratorium on tests—which, I am positive, have not been reciprocally observed by the Communists; by our failure to accord the antimissile missile the priority it deserves; by our failure to explore the potentialities of the neutron bomb and of the so-called Cristoforos effect; by our failure to pursue the further development of nuclear weapons with all the energies at our command; by our recent abandonment of the principle that all disarmament measures, including a test ban, must be based on a system of enforceable inspection—by all these catastrophic errors in judgment, we have placed the free world in mortal peril.

That is why I am worried. That is why I have spoken at such length today.

The Pulitzer prize-winning novel, "Advice and Consent," pictures an America of a few years hence, an America in which demagogues can inflame huge gatherings and bring them to their feet

cheering with the slogan, "I would rather crawl to Moscow on my hands and knees than be killed by an atomic bomb."

Is this to be the image of America tomorrow? God forbid it. For should this book prove prophetic, it will mean that our people have rejected the choice between liberty and death made by Patrick Henry and the Founding Fathers, the choice which drew the cheers of America and of free men everywhere from 1775 down to the recent past.

It would mean the victory of the apostles of nuclear surrender. It would signify our total moral and spiritual capitulation.

It would mean that free America has chosen a slavery which is worse than death.

Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. JOHNSON of Texas. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. JOHNSON of Texas. I understand that the conference report on the mutual security bill is ready. I ask the distinguished Senator from Alabama [Mr. SPARKMAN] to submit it.

MUTUAL SECURITY ACT OF 1960— CONFERENCE REPORT

Mr. SPARKMAN. Mr. President, I submit a report of the committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 11510) to amend further the Mutual Security Act of 1954, as amended, and for other purposes. I ask unanimous consent for the present consideration of the report.

The PRESIDING OFFICER. The report will be read for the information of the Senate.

The legislative clerk read the report.

(For conference report, see House proceedings of today, p. 10167, CONGRESSIONAL RECORD.)

The PRESIDING OFFICER. Is there objection to the present consideration of the report?

There being no objection, the Senate proceeded to consider the report.

Mr. SPARKMAN. Mr. President, I ask unanimous consent that there be printed at this point in the RECORD a statement prepared by the chairman of the Committee on Foreign Relations, the Senator from Arkansas [Mr. FULBRIGHT], in connection with the conference report.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

STATEMENT BY SENATOR FULBRIGHT

This conference report, like all conference reports, represents a compromise. There are some things in it which I wish were not. There are some things not in it which I wish were. I am sure this is true of all the Senate conferees, but on the whole, we are reasonably well pleased with it and are glad to recommend it to the Senate.

The overall total authorized by the bill is \$1,366,200,000, compared with \$1,405,500,000 in the Senate bill and \$1,318,400,000 in the House bill. The accompanying table and statement show the figures in detail, and explain other provisions of the bill.

It is becoming increasingly clear to me that this program cannot survive many more annual authorizations. Every year there is a steady accretion of new restrictions, new conditions which must be met, and new procedures which must be followed in the administration of the program. The cumulative result of these provisions is to make the program so slow and cumbersome as to reduce its effectiveness very greatly. When, under these handicaps, the program fails to perform as it should, its opponents seize on this as an excuse to add more handicaps.

Another mischievous result of annual authorizations is the inordinate amount of time they take in the Congress. Every year the Committee on Foreign Relations is virtually precluded from considering any other business, except the most routine kind, for a period of 6 weeks to 3 months. This year, for example, the committee began its hearings March 22, and here we are completing action the second week in May. In the meantime, we have neglected the International Development Association, the Chicago water diversion, the Antarctic treaty, a badly needed revision of passport legislation, the Japanese security treaty, and various other matters. I am not suggesting that all of these would have been disposed of in the absence of mutual security, but certainly many of them would have been given more consideration than they have so far received.

Neither am I suggesting that the mutual security program should be freed of all legislative oversight. But there comes a point at which legislative oversight is self-defeating, not only for the program overseen but also for the committee overseeing it. We frequently hear complaints, for example, that more information on the program should be made available to Congress. I am not against the Congress having information, but I am reminded of the story about the little girl who went to the library and asked for a book on penguins. She was given a large volume and after reading only part of it, returned it with the comment that "This is rather more than I care to know about penguins." I submit that Congress already has rather more information about the mutual security program than it can digest. The Committee on Foreign Relations has file cabinet on file cabinet of voluminous documents which are widely unread. If the committee were to undertake to scrutinize all these documents and to follow up all the questions they suggest, the whole New Senate Office Building would not be big enough for the staff the committee would need. It might be said that the committee should enlarge its staff, but this, too, would be self-defeating. No matter how many staff members we have, there are still only 17 Senators on the committee. Each of those Senators, as we all know only too well, has a great many other things to do and can absorb only so much about the mutual security program. The staff would work to no avail if it produced more than the committee could digest.

The function of a legislative body is not to second-guess every administrative action, but rather to concern itself with broad questions of policy. The more time and effort the Senate spends on administrative detail, the less time and effort it can spend on policymaking, which is its true role in this Government. In my judgment, we have already gone so far that we allow our policymaking function to suffer and at the same time we seriously handicap the administrators of the program. I think it is